What is claimed is:

1. An optical pickup apparatus for illuminating a recording surface of a recording medium with a light beam to record and/or reproduce information, comprising:

a photodetector for receiving a diffracted light reflected from said recording medium; and

a tilt detector for detecting a tilt amount of said recording medium on the basis of a light intensity within an interference region of a 0th-order diffraction light and at least one diffraction light other than the 0th-order diffraction light of the reflected light received by said photodetector.

2. An optical pickup apparatus according to claim 1, wherein said tilt detector detects a tilt amount of said recording medium on the basis of a light intensity difference in between an outer peripheral area and an inner peripheral area of the interference region.

3. An optical pickup apparatus according to claim 1, wherein said tilt detector detects said tilt amount of said recording medium on the basis of a light intensity within at least one of the interference regions.

4. An optical pickup apparatus according to claim 1, wherein said photodetector has three photo-detecting elements arranged in a tangential direction of said recording medium, a radial

tilt signal S representing a radial tilt amount being expressed as

$$S = L1 - L2 + L3$$

provided that reception signals by the photo-detecting elements are given by L1, L2 and L3 in order with respect to the tangential direction.

5. An optical pickup apparatus according to claim 1, wherein said at least one diffraction light includes one of a +1st order diffraction light and a -1st order diffraction light.

6. An optical pickup apparatus according to claim 1, wherein said recording medium is a rotating recording medium and said tilt detector detects an amount of radial tilt on the basis of a light intensity within a diffraction light interference region in a radial direction of said recording medium.

7. An optical pickup apparatus according to claim 6, wherein said photodetector includes means for receiving the reflection light to generate a radial push-pull signal as a push-pull signal in the radial direction, and said tilt detector includes correcting means for calculating a corrected radial tilt amount by subtracting a value of the radial push-pull signal multiplied by a predetermined coefficient from a tilt signal intensity representing the radial tilt amount.

8. An optical pickup apparatus according to claim 6, wherein

said photodetector includes means for receiving the reflection light to generate, with respect to the radial direction of said recording medium, at least two tangential push-pull signals as push-pull signals in a tangential direction of said recording medium, and said tilt detector includes correcting means for correcting a tilt signal representing the radial tilt amount such that amplitudes of said at least two tangential push-pull signals are made substantially equal.

9. An optical pickup apparatus according to claim 8, wherein said correcting means includes amplifying means for amplifying each of said tangential push-pull signals and an adjuster to adjust a gain of said amplifying means such that the amplitudes of said tangential push-pull signals are made substantially equal.

10. An optical pickup apparatus according to claim 1, wherein said recording medium comprises a recording region formed by land and groove portions.

11. An optical pickup apparatus according to claim 1, wherein said photodetector is a six-element detector having six photo-detecting elements arranged in the regions obtained by two-division in a radial direction of said recording medium and a further three-division in a tangential direction of said recording medium.

12. An optical pickup apparatus according to claim 11, wherein said photodetector is a six-element detector having six photo-detecting elements arranged in the regions obtained by two-division in the radial direction of said recording medium and a further three-division in the tangential direction of said recording medium, a radial tilt signal S representing the radial tilt amount being expressed as

$$S = (L1 - L2 + L3) - (R1 - R2 + R3)$$

provided that reception signals by each pair of said photo-detecting elements opposed to in the radial direction of said recording medium are given by (L1, R1), (L2, R2) and (L3, R3) in an order with respect to the tangential direction.

13. An optical pickup apparatus according to claim 7, wherein said photodetector is a six-element detector having six photo-detecting elements arranged in the regions obtained by two-division in the radial direction of said recording medium and a further three-division in the tangential direction of said recording medium, and wherein a radial tilt signal S representing the radial tilt amount, a radial push-pull signal Pr and the corrected radial tilt signal S' representing the corrected radial tilt amount are expressed as

$$S' = S - \alpha \times Pr$$

$$S = (L1 - L2 + L3) - (R1 - R2 + R3)$$

$$Pr = (L1 + L2 + L3) - (R1 + R2 + R3)$$

provided that reception-light signals by each set of said photo-detecting elements opposed to in the radial direction are

given by (L1, L2, L3) and (R1, R2, R3) in order with respect to the tangential direction and the predetermined coefficient is given by α.

14. An optical pickup apparatus according to claim 9, wherein said photodetector is a six-element detector having six photo-detecting elements arranged in the regions obtained by two-division in the radial direction of said recording medium and a further three-division in the tangential direction of said recording medium, said amplifying means including two amplifiers for amplifying reception-light signals by each set of said photo-detecting elements opposed to in the radial direction, and wherein the tangential push-pull signal amplitudes PT_L, PT_R and the corrected radial tilt signal S' representing the corrected radial tilt amount are expressed as

$$S' = G_L \times (L1 - L2 + L3) - G_R \times (R1 - R2 + R3)$$

$$PT_L = L1 - L3$$

$$PT_R = R1 - R3$$

$$G_L \times PT_L \approx G_R \times PT_R$$

provided that reception-light signals by each set of said photo-detecting elements opposed to in the radial direction are given by (L1, L2, L3) and (R1, R2, R3) in order with respect to the tangential direction, and the gains of said two amplifiers are given by G_R and G_L.

15. An optical pickup apparatus according to claim 9, wherein said photodetector is an eight-element detector having eight

photo-detecting elements arranged in the regions obtained by two-division in the radial direction of said recording medium and a further four-division in the tangential direction of said recording medium, said amplifying means including two amplifiers for amplifying reception-light signals by each set of said photo-detecting elements opposed to in the radial direction, and wherein the tangential push-pull signal amplitudes PT_L, PT_R and the corrected radial tilt signal S' representing the corrected radial tilt amount are expressed as

$$S' = G_L \times (L1 - L2 - L3 + L4) - G_R \times (R1 - R2 - R3 + R4)$$

$$PT_L = L1 + L2 - L3 - L4$$

$$PT_R = R1 + R2 - R3 - R4$$

$$G_L \times PT_L \approx G_R \times PT_R$$

provided that reception-light signals by each set of said photo-detecting elements opposed to in the radial direction are given by (L1, L2, L3, L4) and (R1, R2, R3, R4) in order with respect to the tangential direction, and the gains of said two amplifiers are given by G_R and G_L.

16. A method of detecting a tilt amount of a recording medium for recording and/or reproducing information by illuminating a recording surface of said recording medium with a light beam, comprising the steps of:

receiving a diffracted light reflected from said recording medium; and

generating a tilt signal representing a tilt amount of said recording medium on the basis of a light intensity within

an interference region of a 0th-order diffraction light and at least one diffraction light other than the 0th-order diffraction light of the reflected light received in the step of receiving.

17. A method according to claim 16, wherein the step of generating a tilt signal representing a tilt amount of said recording medium generates said tilt signal on the basis of a light intensity difference between an outer peripheral area and an inner peripheral area of the interference region.

18. A method according to claim 16, wherein the step of generating a tilt signal representing a tilt amount of said recording medium generates said tilt signal on the basis of a light intensity within at least one of the interference regions.

19. A method according to claim 16, wherein said at least one diffraction light includes one of a +1st order diffraction light and a -1st order diffraction light.

20. A method according to claim 16, wherein said recording medium is a rotating recording medium and the step of generating a tilt signal representing a tilt amount of said recording medium generates a radial tilt signal on the basis of a light intensity within a diffraction light interference region in a radial direction of said recording medium.

21. A method according to claim 20, wherein the step of receiving includes the step of receiving the reflection light to generate a radial push-pull signal as a push-pull signal in the radial direction, and the step of generating a tilt signal includes the step of calculating a corrected radial tilt amount by subtracting a value of the radial push-pull signal multiplied by a predetermined coefficient from a tilt signal intensity representing the radial tilt amount.

22. A method according to claim 20, wherein the step of receiving includes the step of receiving the reflection light to generate, with respect to the radial direction of said recording medium, at least two tangential push-pull signals as push-pull signals in a tangential direction of said recording medium, and the step of generating a tilt signal includes the step of correcting a tilt signal representing the radial tilt amount such that amplitudes of said at least two tangential push-pull signals are made substantially equal.